

Stenographic Transcript
Before the

COMMITTEE ON
ARMED SERVICES

UNITED STATES SENATE

HEARING TO RECEIVE TESTIMONY ON THE DEPARTMENT OF
ENERGY AND NATIONAL NUCLEAR SECURITY
ADMINISTRATION ON ATOMIC ENERGY DEFENSE ACTIVITIES
IN REVIEW OF THE DEFENSE AUTHORIZATION REQUEST FOR
FISCAL YEAR 2023 AND THE FUTURE YEARS DEFENSE
PROGRAM

Thursday, May 19, 2022

Washington, D.C.

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8
9 U.S. Senate

10 Committee on Armed Services

11 Washington, D.C.
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13 The committee met, pursuant to notice, at 9:30 a.m. in
14 Room SD-G50, Dirksen Senate Office Building, Hon. Jack Reed,
15 chairman of the committee, presiding.

16 Committee Members Present: Senators Reed [presiding],
17 Shaheen, Gillibrand, Blumenthal, Kaine, King, Warren,
18 Peters, Kelly, Inhofe, Wicker, Fischer, Rounds, Ernst,
19 Tillis, Sullivan, Scott, Blackburn, Hawley, and Tuberville.
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1 OPENING STATEMENT OF HON. JACK REED, U.S. SENATOR FROM
2 RHODE ISLAND

3 Chairman Reed: Good morning. The committee meets
4 today to receive testimony on the Department of Energy's
5 Atomic Energy Defense programs in review of the Fiscal Year
6 2022 President's Defense Budget Request.

7 I would like to welcome our witnesses, Secretary of
8 Energy Jennifer Granholm and Administrator of the National
9 Nuclear Security Administration Jill Hruby. Thank you for
10 joining us. I also want to thank your Department's
11 workforce for their dedicated service to our nation. Please
12 relay that to them.

13 The fiscal year 2023 budget request for the defense
14 functions of the Department of Energy is \$29.7 billion.
15 This figure accounts for about 61 percent of the Department
16 of Energy's overall \$48 billion request. Given the share of
17 the defense function of the Department's budget, it is
18 important for this committee to continue its oversight of
19 the Department's defense activities, which span items like
20 maintaining our nuclear stockpile to cleaning up former Cold
21 War defense production sites.

22 Within this defense proposal, the National Nuclear
23 Security Administration, or NNSA, is requesting \$21.4
24 billion, a 3.2 percent increase over last year's level of
25 \$20.6 billion. I would also note that the amount for the

1 defense portion of environmental cleanup increased by 3
2 percent to \$6.9 billion.

3 The Strategic Forces Subcommittee held a hearing 2
4 weeks ago on the Nuclear Weapons Council, a statutory body
5 that was created in the 1946 Atomic Energy Act to bridge the
6 civilian-military relationship over the manufacturing and
7 employment of nuclear weapons. By all accounts the message
8 conveyed to the subcommittee was that the relationship
9 between the Department of Defense and the National Nuclear
10 Security Administration was healthy and productive.

11 However, with respect to the Department's requirement
12 to increase production of plutonium pits to a rate of 80
13 pits per year by 2030, the subcommittee found several
14 issues. Significantly, the costs for converting the Mixed
15 Oxide Fuel plant at the Savannah River Site have risen
16 significantly from \$4 billion to between \$6 and \$11 billion.
17 Further, the project timeline stretched from the 2030 target
18 to between 2032 or 2035. We need to understand what has
19 driven these overruns and how we can hold the Department of
20 Energy accountable to this longstanding Department of
21 Defense requirement.

22 I understand that the NNSA is experiencing its highest
23 workload since the 1980s as it manages five major warhead
24 programs while rebuilding nuclear infrastructure that dates
25 back 70 years to the Manhattan Project. This original

1 infrastructure held up well through the first two cycles of
2 triad modernization in the 1960s and 1980s, but it has
3 essentially aged out for the third cycle that we are
4 currently undertaking. I would like to know how NNSA is
5 managing this workload while simultaneously modernizing its
6 production facilities.

7 Finally, I hope our witnesses will update us on efforts
8 to continue cleaning up former defense production sites,
9 particularly at the Hanford Nuclear Reservation. These are
10 commitments made to local communities that we cannot walk
11 away from. The Hanford site has 177 million gallons of
12 radioactive waste stored in underground tanks, some which
13 are leaking. Your Department is starting operations to
14 remove the first 40 percent of low-activity radioactive
15 waste from these tanks, which accounts for 90 percent of the
16 waste, and I commend you on this important milestone. I
17 understand you are also holding discussions with the State
18 of Washington on how to next remove the high-activity
19 radioactive waste in the tanks. I would ask that you share
20 how you are working with the state and local communities on
21 these efforts.

22 Again, I want to thank our witnesses for appearing
23 today. I look forward to your testimonies.

24 Now let me recognize the ranking member, Senator
25 Inhofe.

1 STATEMENT OF HON. JAMES INHOFE, U.S. SENATOR FROM
2 OKLAHOMA

3 Senator Inhofe: Thank you Mr. Chairman. I also want
4 to welcome our witnesses. We have had the privilege of
5 being with our witnesses on other issues in the past, and I
6 am honored to have them here today.

7 One of the things I have been proud of over the past
8 few years is this committee's focus on rebuilding the
9 foundation of United States national security, our nation's
10 nuclear deterrent. We have made a lot of progress in this
11 area over the past several years, but even that progress is
12 just the first step in a long journey to make up for decades
13 of neglect.

14 A third of NNSA's facilities date back to World War II,
15 and we have buildings where concrete has fallen from the
16 ceiling. It has hit some of the workers. And people are
17 shocked when they hear of these things. We have to do
18 better, and I think we all understand that.

19 In contrast, our adversaries clearly see value in
20 prioritizing their nuclear programs. Our lack of focus on
21 competing in the nuclear arena puts us in danger of falling
22 even further behind, and puts our nation and our allies at
23 risk.

24 China is expanding its military capabilities faster
25 than any country in history. Its investments are shifting

1 the global balance of power, and based on recent testimony,
2 China's nuclear modernization continues to outpace even our
3 worst predictions.

4 Putin's unprovoked invasion of Ukraine and his reckless
5 threats of nuclear escalation have shattered the security of
6 Europe, and for the first time in decades, forced Americans
7 to face the possibility of a nuclear attack.

8 Not to be outdone, North Korea is on a record pace for
9 missile testing, and is reportedly preparing for another
10 nuclear test.

11 Unfortunately, the Administration's fiscal year 2023
12 DoD budget does not give DoD and NNSA the real growth they
13 need to meet the National Defense Strategy. And while we
14 agreed on real growth last year, inflation has completely
15 destroyed that.

16 In fact, I have a letter from the administrator that
17 says our plutonium pit production project is underfunded by
18 \$500 million. This is the letter, and I want to make this a
19 part of the record at this point.

20 Chairman Reed: Without objection.

21 [The information follows:]

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1 Senator Inhofe: In fact, we feel that this tells the
2 whole story.

3 I look forward to your testimony on these issues and
4 the rest of the Department of Energy's national security
5 priorities. Thank you, Mr. Chairman.

6 Chairman Reed: Thank you very much, Senator Inhofe.
7 Secretary Granholm, please.

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1 STATEMENT OF THE HONORABLE JENNIFER GRANHOLM,
2 SECRETARY OF ENERGY

3 Secretary Granholm: Thank you so much, Chairman Reed
4 and Ranking Member Inhofe. My thanks also to the members of
5 the committee. It is a privilege to be before you once
6 again on behalf of the Department of Energy and with Jill
7 Hruby, our NNSA Administrator and the Under Secretary of
8 Nuclear Security.

9 As the 16th Secretary of Energy, I have the
10 responsibility of leading this Department at a pivotal time.
11 Putin's invasion of Ukraine, the outbreak of armed conflict
12 on the European continent has underscored the absolute
13 importance of the Department's national security mission.
14 We appreciate the consistent, bipartisan support that the
15 Senate Armed Services Committee has long given the
16 Department when it comes to this mission, and we believe
17 this committee will see in this latest budget request our
18 resolute commitment to advancing that national security
19 mission.

20 I am pleased to note that the partnership between the
21 Department and our NNSA, our National Nuclear Security
22 Administration, is strong, it is collaborative, and
23 likewise, we continue to work closely with our colleagues at
24 the Department of Defense through the Nuclear Weapons
25 Council.

1 As security risks rise around the world, we know we
2 must ensure that the nation's ability to respond to threats
3 remains unmatched. At the same time, we know that our focus
4 on responsiveness must be paired with one of responsibility.
5 Our efforts begin, of course, with maintaining the safety,
6 security, reliability, and effectiveness of the nuclear
7 weapons stockpile. This is the cornerstone of our
8 deterrent. It is critical to our ability to protect the
9 American people and reassure our allies.

10 Relatedly, our work to provide the U.S. Navy with safe
11 and effective nuclear propulsion technology is essential to
12 ensuring that our military is equipped to carry out their
13 operations.

14 Ultimately, though, we know that the nation is safer,
15 and our deterrent is stronger, and our military is more
16 effective when facing lower nuclear risks, and that is why
17 we invest in nonproliferation and arms control and in
18 efforts to counter the threat of nuclear terrorism. As the
19 2022 Nuclear Posture Review makes clear, each of these stock
20 -- stockpile management, naval propulsion, and nuclear risk
21 reduction -- are all top priorities for the Biden
22 administration. Our budget request for fiscal year 2023
23 echoes this Administration's dedicated support for each.

24 Let me just spend a minute to highlight a few other
25 areas that are reflected in the budget request. First is

1 taking care of the communities that have supported the
2 nation's nuclear weapons programs and nuclear research. The
3 Department's Office of Environmental Management is home to
4 the world's largest environmental cleanup program. The
5 program has completed operations at 92 of 107 cleanup sites
6 over the past 30 years, and our environmental management
7 team reached important milestones even this past 2 years,
8 with contending with challenges posed by the COVID-19
9 pandemic. Our budget request will equip them with the
10 resources they need to continue building on that track
11 record.

12 Second, infrastructure modernization and workforce
13 development. As my colleague, Jill Hruby, will explain in
14 greater detail, the NNSA is focused on mission delivery in a
15 timely and cost-effective manner. Infrastructure and
16 workforce are essential this goal. Approximately 60 percent
17 of NNSA facilities are beyond their 40-year life expectancy,
18 some, as has been noted, date back to the Manhattan Project.
19 But our ability to execute our mission depends on a modern,
20 flexible, and resilient nuclear security infrastructure, and
21 that is why that means we have to continue to bring more of
22 these facilities into the 21st century.

23 We also have to make sure that we have top-notch talent
24 to staff those facilities, by recruiting and training a new
25 generation of employees across our national security

1 portfolio. And that is why we have requested investments in
2 both our infrastructure and our workforce needs.

3 I am mindful of the trust that this committee and the
4 rest of Congress has placed in the Department, and I am
5 proud to lead this team as we reduce nuclear risk while
6 navigating an increasingly complex global environment. I
7 thank you for your partnership in keeping the United States
8 safe and secure, and we look forward to your questions.

9 [The prepared statement of Secretary Granholm and Ms.
10 Hruby follows:]

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1 Chairman Reed: Thank you, Madam Secretary.
2 Administrator Hruby, please.

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1 STATEMENT OF THE HONORABLE JILL HRUBY, ADMINISTRATOR,
2 NATIONAL NUCLEAR SECURITY ADMINISTRATION

3 Ms. Hruby: Thank you, Chairman Reed, Ranking Member
4 Inhofe, and members of the committee for the opportunity to
5 appear before you. As Secretary Granholm said, we
6 appreciate the committee's consistent, bipartisan support
7 for the Department of Energy's enduring national security
8 missions.

9 Today we face a shifting geopolitical environment,
10 rapidly evolving technological capabilities and
11 modernization needs that are expanding our mission
12 requirements. Meeting these challenges on behalf of the
13 American people requires us to act in a responsive and
14 responsible manner.

15 To reach our objectives we are simultaneously executing
16 our largest weapon modernization program in decades, while
17 recapitalizing our infrastructure and investing in cutting-
18 edge scientific, engineering, and technical capabilities.
19 We are also providing critical resources to our
20 nonproliferation, counterproliferation, and naval nuclear
21 propulsion programs that play an important, complementary
22 role to our weapons programs. We feel a sense of urgency in
23 achieving our objectives and will act to meet our goals in a
24 timely and cost-effective manner.

25 The challenges ahead are significant, but I am

1 confident in the Department's ability to rise to the
2 occasion, in partnership with Congress and our colleagues in
3 the Departments of State, Defense, Homeland Security, and
4 around the world.

5 Thank you, and I look forward to your questions.

6 Chairman Reed: Well thank you very much, Administrator
7 Hruby. Let me begin with a question for you.

8 I had the opportunity to participate in the
9 subcommittee hearing and I have some concerns that NNSA does
10 not have a full picture of the effort to produce 80 pits a
11 year, both Los Alamos and Savannah River, which leads me to
12 the question, does NNSA have an integrated schedule of
13 milestones and costs for achieving this? And if we do, I
14 would very much like to see it.

15 Ms. Hruby: Thank you, Chairman Reed. I think, as we
16 talked before, we have an integrated schedule for each
17 facility that is quite complete. We are in the process of
18 integrating those schedules so that we have a master
19 schedule for the entire plutonium project, including all the
20 peripheral things like security that goes with that, and we
21 are committed to provide you that this year.

22 Chairman Reed: Well, thank you very much. One of the
23 aspects of this that is complicated is that if something
24 happens in one location it would obviously affect the other.
25 It is not just structural. It is also personnel and getting

1 ahead of that would be very important, not only for us but
2 for us. So thank you.

3 Secretary Granholm, on April 12th, the Administrator
4 wrote to this committee that it had an unfunded shortfall of
5 \$250 million for converting the mixed oxide fuel plant at
6 the Savannah River site for production. Can you tell the
7 committee what this shortfall consists of and whether the
8 Nuclear Weapons Council has validated this shortfall as they
9 committed to do so at the May 11th Strategic Forces
10 Subcommittee hearing?

11 Secretary Granholm: The \$500 million that is being
12 requested through the letter that Jill Hruby sent is to
13 really fulfill what this committee would like to see happen,
14 I believe, many on this committee, which is to accelerate to
15 the extent we can the production of pits. We will not be
16 able to get to the 2030 goal. We know that. But what this
17 letter does is acknowledge that there are some long-lead
18 items, like gloveboxes, et cetera, that take time, that we
19 know we are going to need, that we can now begin to procure.

20 With supply chain crunches, et cetera, we believe that
21 we would be in a better position to be able to purchase
22 those now so that when we get to the point where the
23 facility is complete -- and, of course, as you know, we are
24 in the middle of a design of that redesign, and that is
25 about 90 percent complete -- that we will be able to get

1 people into the building and begin to deal with the
2 plutonium pit issue right away. So that is what the letter
3 really intends to do is to accelerate, to the extent we can,
4 even though it will not get us to the 2030 --

5 Chairman Reed: Well, Madam Secretary, that is a very
6 good explanation of the letter. It is very accurate. But a
7 few days later the Nuclear Weapons Council issued a letter
8 indicating that they did not agree with the money. That is
9 my understanding. What is the position of the Nuclear
10 Weapons Council, is essentially the question?

11 Secretary Granholm: Yeah, and I will Under Secretary
12 Hruby speak to this, but it is my understanding the Nuclear
13 Weapons Council will be supportive of that, or is supportive
14 of that.

15 Ms. Hruby: Chairman Reed, we are meeting tomorrow as
16 the Nuclear Weapons Council to discuss this budget request.
17 As you heard in the hearing last week, the members of the
18 Nuclear Weapons Council are supportive of this need to bring
19 money up to do the equipment pre-buy so that we can make
20 sure we can construct SRPPF as quickly as possible. You
21 will hear from the Nuclear Weapons Council soon.

22 Chairman Reed: Thank you very much. We would
23 appreciate that, Administrator Hruby.

24 Madam Secretary, you pointed out how your environmental
25 team has done an extraordinary job over the years. There is

1 still, as I mentioned, the Hanford site and other sites.
2 But at Hanford you are making progress on the low-level
3 radioactive waste, but have you started planning for the
4 high-activity waste in these tanks?

5 Secretary Granholm: Yes, Mr. Chairman. The budget
6 supports the beginning of the effort on the high-level
7 waste. We also note that this committee had asked for an
8 assessment of alternatives as well. That study is being
9 undertaken right now in parallel with the National
10 Academies' study, both of which should be complete before
11 the fall so that we will have an assessment of what the
12 other pieces are, even as we know that we will still be
13 treating some of that high-level waste on site, perhaps to
14 move to vitrification as well.

15 Chairman Reed: Thank you very much, Madam Secretary.

16 Senator Inhofe, please.

17 Senator Inhofe: Thank you, Mr. Chairman. Madam
18 Secretary, you answered the question I was going to address
19 adequately, so let me just mention to Administrator Hruby
20 that in the past NNSA officials argued for real sustainable
21 annual growth to keep modernization on track. Now
22 significantly will our programs be delayed if NNSA faces
23 annual shortages of a half-billion dollars? What is that
24 going to do to us if that continues?

25 Ms. Hruby: Senator Inhofe, the \$500 million request is

1 to assure that we do not get more behind by moving money up
2 and making purchases earlier, based on information that we
3 have learned as we have completed our large construction
4 project, the Uranium Processing Facility, and other projects
5 at Los Alamos and around the complex.

6 So we are totally synced up with the Department of
7 Defense on all of our weapons programs, our deliveries of
8 the modernization programs. It is challenge but we stay in
9 close contact and we are completely synced up. We are just
10 trying to keep, with this request, our infrastructure
11 programs in a way that we can execute those as quickly as
12 possible.

13 Senator Inhofe: And in my opening statement I talked
14 about the condition of some of the facilities that we have
15 there. Do you have any comments on that? Have you looked
16 into that and see what that path forward would be
17 appropriate at this time?

18 Ms. Hruby: Yeah, Senator Inhofe, since I have been
19 confirmed into this position I have visited the complex,
20 every place in the complex and most of them many times, and,
21 in fact, we have a lot of infrastructure work to do, as you
22 noted in your opening statement. We are developing a long-
23 term infrastructure plan. We have some large projects going
24 right now, and I think they are the right projects, not only
25 the big projects in uranium and plutonium but also projects

1 in explosives and tritium and lithium and depleted uranium
2 and other activities.

3 But we have so many needs that will go out for a long
4 time, and we are working on a long-term infrastructure plan
5 that includes not only our production complex but also our
6 science and technology facilities.

7 Senator Inhofe: In other words, you are on it, okay?

8 Ms. Hruby: Well, this is going to be long term.

9 Senator Inhofe: I know it is. I was saying that as a
10 compliment. So go ahead.

11 Ms. Hruby: Okay. Well, I will take the compliment.
12 Thank you.

13 Senator Inhofe: Okay, good. Thank you, Mr. Chairman.

14 Chairman Reed: Thank you, Senator Inhofe.

15 Senator Shaheen, please.

16 Senator Shaheen: Thank you, Mr. Chairman. Good
17 morning to both of you. Thank you both for being here this
18 morning and for your work on behalf of the country.

19 Administrator Hruby, you talked about what we are doing
20 to modernize facilities. Can you also talk about our
21 progress on addressing any potential for cyber hacking to
22 affect our facilities and our nuclear program?

23 Ms. Hruby: Thank you, Senator. The cyber issue is
24 very real and very much on our minds all the time. So once
25 Frank Rose and I, my principal deputy, assumed these

1 positions we asked for an independent review of our cyber
2 capabilities. That review was conducted by the Institute
3 for Defense Analysis, and it will be published this summer.

4 We also have increased our budget for our cybersecurity
5 programs, and we have created a line item in our defense
6 program's budget that looks at digital assurance of the
7 weapons enterprise.

8 Senator Shaheen: So are you comfortable that today we
9 would not be hacked successfully?

10 Ms. Hruby: Look, the answer is I think we are doing
11 everything that we can. This is a tricky business, so we
12 have to be prepared in the event that there is a successful
13 hack that we did not anticipate, we do not anticipate, and
14 know how to respond to that. And so we are working on both
15 sides of this, honestly, both a defensive but what would
16 happen, you know, how quickly, what would we do and what
17 would happen in the event of an attack. But we prevent, you
18 know, many attacks a day in our complex, and we hope to
19 continue to be successful at doing that.

20 Senator Shaheen: And Secretary Granholm, do you share
21 the view that we are doing everything we can in the
22 Department of Energy to address potential hacking that could
23 affect our nuclear program?

24 Secretary Granholm: Thank you, Senator, for the
25 question, because it is so important, especially in the

1 global context that we are in. Obviously, there are
2 thousands of attempts per day, and we have been successful
3 at not being successfully penetrated. The bad guys are
4 morphing all the time, and they are continuing to enhance
5 their capabilities, which is why when the Administrator says
6 they did an assessment, I mean, part of the challenges in
7 that assessment are making sure that we have got the IT
8 professionals that are able to continually keep us on the
9 cutting edge. And so I know they have engaged in a program
10 to do recruiting, and we have also not just in cyber but
11 across the NNSA complex increased pay because we want to
12 make sure we can retain and attract the professionals that
13 the private sector is also vying for.

14 The Department and the NNSA I know have continually
15 installed next-generation technology to monitor, to detect,
16 to address, to be able to make sure we know what is
17 happening on the system. But it is a continuous battle, and
18 we will be vigilant all the way.

19 Senator Shaheen: Well, thank you both very much for
20 that. As you point out, it is critical and it is not at all
21 clear in this environment what the next threat is going to
22 be.

23 Certainly Russia's unprovoked war in Ukraine, in
24 particular, underscores the urgent need for modernization of
25 our nuclear efforts. Obviously, it also underscores the

1 challenge that we are facing with energy. And Secretary
2 Granholm, to get off the budget a little bit and talk about
3 what is happening with Russia's weaponization of energy, can
4 you talk about what we are doing to work with our partners
5 to address Russia's efforts to cut off Europe? Earlier this
6 week they cut off Finland. Last week it was Bulgaria. What
7 are we doing with our allies to try and address the energy
8 concerns that they have as the result of the war in Ukraine?

9 Secretary Granholm: Yeah, thank you, Senator. As you
10 have noted, this has really caused an alliance of our allies
11 to make us stronger than we have ever seen. It is clear
12 that everyone needs to become independent of Russian oil and
13 gas, and, of course, for those allies that have been
14 significantly reliant upon it is a great challenge.

15 So we have been, the Department of Energy and our
16 allies -- in fact, I have a ministerial today with the U.K.
17 -- everyone is looking at next-generation technologies for
18 making sure we do not see this again, whether it is next-
19 generation nuclear or hydrogen, et cetera. But we also are
20 looking at the today. So, of course, the United States is
21 doing what it can to permit the export of liquified natural
22 gas to Europe to make sure that they have the ability to
23 wean themselves off of Russian gas.

24 The oil situation is really challenging because
25 Russia's actions have pulled 1.5 million barrels a day off

1 of the global supply. The President's release of 1 million
2 barrels a day from the Strategic Petroleum Reserve is set to
3 try to stabilize those prices.

4 But the bottom line is we are working with our allies
5 on all manner of being able to help make them and help make
6 ourselves independent from the volatility of fossil fuels,
7 especially from countries that have petro-dictators that
8 weaponize energy, and ultimately, many of these countries,
9 most of these countries see the movement to clean energy as
10 a way to, in the medium and long term, pursue energy
11 independence, since no country has ever been held hostage to
12 access to the wind or access to the sun.

13 Senator Shaheen: Thank you very much.

14 Chairman Reed: Thank you, Senator Shaheen.

15 Senator Rounds, please.

16 Senator Rounds: Thank you, Mr. Chairman. Secretary
17 Granholm, Administrator Hruby, thank you to both of you for
18 your service to our country. I would like to begin with a
19 question for Administrator Hruby.

20 The W80-4, which is the nuclear weapon itself that
21 would be on the Long Range Standoff weapon, the new LRSO,
22 the integration between those two will be key in terms of
23 developing the weapon system that would be carried by our
24 bomber force, both the B-52 and eventually the B-21 stealth
25 bomber. The timeline and integration with the B-21 and the

1 B-52 is crucial to modernizing our nuclear deterrent.

2 The W80-4 appears to be continually slipping to the
3 right in terms of its development. We have got some
4 concerns about that timeline, and specifically that the
5 individual components in the development of this system just
6 simply do not seem to be meeting up with the timelines that
7 had been earlier developed in terms of getting it all put
8 together.

9 To the extent that you can in this open forum, can you
10 explain the integration efforts between the W80-4, the
11 weapon itself, and the LRSO, the system that is going to
12 carry it, and the individual platforms such as the B-21 that
13 are being developed in order to deliver this weapon, and are
14 the first production units of the W80-4 still slated to be
15 delivered in 2025?

16 Ms. Hruby: Thank you, Senator Rounds. Let's see. We
17 work continuously with the military to make sure the W80-4
18 and the LRSO missile are aligned. The LRSO missile initial
19 operating capability is in 2030. We had initially put the
20 W80-4 first production unit in 2025 as a way to have space
21 between all of the systems that we are working on today.
22 There are a few components, a handful of components on the
23 W80-4 which will have difficulty making that FPU, but we are
24 completely synced up on being able to produce the W80-4 for
25 the LRSO initial operating capability.

1 Senator Rounds: The GAO had reported that the NNSA
2 would enter phase 6.4, which is the production engineering,
3 in late 2021. However, the NNSA now projects entry into
4 phase 6.4 in June of 2022. We are 15 days away from that.
5 Are you going to make that goal?

6 Ms. Hruby: We will, this summer, lay out a new
7 schedule for the W80-4 that has an updated FPU that the
8 military will be, again, completely approved and synced up
9 with.

10 Senator Rounds: Thank you. Also for Administrator
11 Hruby, according to statute -- and I think the chairman
12 alluded to this in his opening questions to you -- according
13 to Federal statute in law now, if DOE does not certify that
14 it can meet plutonium pit production requirements the
15 Nuclear Weapons Council chairman is required, by law, to
16 submit a plan to enable the nuclear security enterprise to
17 meet these requirements. Again, according to statute this
18 plan shall include the identification of DOE resources that
19 the chairman determines should be redirected to support the
20 plan to meet the requirements.

21 Administrator Hruby, to the best of my knowledge such
22 as a plan has never been sent to the Congress defense
23 committees. As a statutory member of the Nuclear Weapons
24 Council, can you tell me are you aware of that statute, do
25 you intend to comply with that statute, or do you need to

1 get back to us on what your plans will be?

2 Ms. Hruby: The Nuclear Weapons Council has looked
3 extensively at the ability to make 80 pits per year and
4 determined that money was not enough.

5 Let me just say a little bit more about the idea of
6 having a plan to use additional resources. You know, I am
7 an engineer. I spent time with blueprints of the Savannah
8 River pit production facility, trying to find every angle
9 that we could accelerate the design and the construction and
10 then the ability to produce pits there. There is no path to
11 produce pits. There is no way to do that that would not
12 sacrifice our long-term need to produce the minimum 50 pits
13 per year at Savannah River forever more, or at least as far
14 as we can see into the future.

15 So anything we do now actually puts at risk the longer-
16 term need. It would delay our ability right now if I
17 redirected resources to look at this issue of what does it
18 take to get to 2030. I believe, and the Nuclear Weapons
19 Council believe, a better path is to figure out how we meet
20 the needs -- and we think there is a path -- to maintain
21 safe, secure, reliable, credible deterrent and the Sentinel
22 without the pits in 2030.

23 Senator Rounds: My concern, Administrator Hruby, is
24 that under the statute there is a redirection that is
25 required, and if that is the case that hurts other programs

1 that are equally as important within DOE. This is the time
2 of the year in which allocations are made and budgets are
3 developed and appropriations are planned for, and if there
4 needs to be additional direction or additional
5 appropriations made, I am simply stating that this needs to
6 happen now and that we should not be waiting another year or
7 delaying another year if there are items that should be
8 appropriated, or at least the Congress should be doing to
9 make sure that DOE has the resources necessary to accomplish
10 all of those items that DOE has been authorized to move
11 forward on.

12 I simply think that the statute, in particular, was
13 designed to make sure that Congress was aware if you did not
14 have the resources to meet the necessary minimum
15 requirements in terms of the nuclear production
16 capabilities. It seems to me that what you are telling us
17 is that we are so far down the line that you simply do not
18 see a path forward in which we are going to meet those
19 minimum requirements.

20 Ms. Hruby: That is correct. The 2030 requirement, the
21 Nuclear Weapons Council, and I am a member, has agreed that
22 we cannot meet that requirement, and it is not resource
23 dependent. The request for the additional money, the \$500
24 million, was aimed at getting as close to that requirement
25 as possible.

1 Senator Rounds: Thank you. Thank you, Mr. Chairman.

2 Chairman Reed: Thank you, Senator Rounds.

3 Senator Warren has arrived. Are you ready, Senator
4 Warren?

5 Senator Warren: Always ready. Thank you. So thank
6 you, Mr. Chairman.

7 The cryptocurrency market has exploded over the last
8 few years, driven by the popularity of Bitcoin, which
9 amounts for about 40 percent of the entire crypto market.
10 Bitcoin's network is secured through a proof-of-work
11 algorithm which involves miners using powerful computers to
12 guess a random string of numbers in order to verify
13 transactions and win a Bitcoin reward. The computational
14 work required is deliberately inefficient, and it requires
15 increasing amounts of energy consumption as more minors
16 compete.

17 Now today, Bitcoin consumes more electricity than
18 countries like Sweden and Pakistan. That is a country with
19 more than 220 million people. In fact, a single Bitcoin
20 transaction uses the same amount of power as the average
21 U.S. household uses in 72 days, and a single large crypto
22 mining facility, typically a warehouse filled with rows and
23 rows of servers, can consume as much energy as a quarter of
24 a million houses in the same period of time.

25 So Secretary Granholm, one of your key responsibilities

1 is to address energy challenges facing our country. Does
2 the Federal Government currently know how many crypto miners
3 are operating in the United States and how much energy they
4 are consuming?

5 Secretary Granholm: No. The DOE does not explicitly
6 track electricity consumption associated with cryptocurrency
7 operations, and I would love to work with you on making sure
8 that this happens.

9 Senator Warren: Well I am glad to hear that because I
10 am really concerned if we are not tracking this information,
11 because the one thing we do know is that more and more
12 Bitcoin mining operations are moving offshore. Between 2019
13 and 2021, the United States' share of global mining
14 increased from 4 percent to 35 percent, meaning that over a
15 third of the global computing power dedicated to bitcoin
16 mining is now drawn from computers in the United States that
17 are spitting out random numbers around the clock.

18 Mining is increasing emissions from coal and natural
19 gas generation, especially when miners bring old, polluting,
20 fossil fuel plants around the country online. It also is
21 driving up electricity prices for consumers and small
22 businesses in those same communities. And that is why I
23 have written to several of the largest crypto miners in the
24 United States, asking them for information about the
25 environmental impacts of their operations. But I think that

1 our agencies can do more here as well.

2 So Secretary Granholm, I know that you are working with
3 other agencies on a report on crypto's climate impact as
4 part of the President's Executive order on digital assets.
5 Do you think it would be valuable if we had additional
6 information about the impact of cryptocurrencies on our
7 environment and on our energy grid?

8 Secretary Granholm: Absolutely.

9 Senator Warren: You want to elaborate on that?

10 Secretary Granholm: I mean, it is critical to
11 understand the strains upon the grid, especially as we face
12 increased use of the grid for other purposes. I mean, the
13 Bipartisan Infrastructure law gave us funding to be able to
14 expand the capacity of the grid, but the projections of the
15 expansion of the capacity of the grid that most modelers use
16 have not taken into full account the huge energy suck that
17 cryptocurrency represents.

18 And so while we add electric vehicles to the grid, for
19 example, we have also got to take a look at these other uses
20 because that will require significant additional resources
21 to be able to respond to if we do not do something else.

22 Senator Warren: Thank you. You know, addressing
23 crypto's risks is not just a job for financial regulators.
24 It is a job for climate regulators as well. Crypto mining
25 could undermine our progress to fight climate change, and I

1 look forward to working with you to keep that from
2 happening.

3 Before I close I would just like to turn to you very
4 quickly, Ms. Hruby. We have gone over this in previous
5 hearings but I want to reiterate to my colleagues that I
6 remain deeply concerned about our pit production plans.
7 Many of these problems I know predate your tenure, but let
8 us be clear here. NNSA does not know how much this program
9 will cost, the costs we do know about have doubled in a
10 matter of months, and now your office is already asking for
11 a half a billion dollars more than the budget request, even
12 though the Nuclear Weapons Council has said it will not
13 bring us any closer to reaching our production goals by
14 2030.

15 NNSA has had a terrible record of mismanagement and it
16 seems too likely that this will be another case study in
17 wasting billions of dollars in taxpayer money.

18 So I am out of time but I just want to register that
19 concern.

20 Thank you, Mr. Chairman.

21 Chairman Reed: Thank you, Senator Warren.

22 Senator Tuberville, please.

23 Senator Tuberville: Thank you, Mr. Chairman. Thank
24 you for being here today.

25 Secretary Granholm, approximately 20 percent of our

1 grid is nuclear. Correct?

2 Secretary Granholm: Correct.

3 Senator Tuberville: How many of our nuclear plants
4 will reach the end of their lifespan in the next 20 years?

5 Secretary Granholm: That is our concern, is that a
6 good number of them, whether they reach the end of their
7 lifespan or there may be communities that decide that they
8 want to go in a different direction. We want to keep our
9 nuclear fleet afloat, which is why we just issued a civilian
10 nuclear credit to be able to do that. And we want to make
11 sure that we have got additional nuclear opportunities.

12 Senator Tuberville: So basically a major of them in
13 the next 20 years --

14 Ms. Hruby: It is a good --

15 Senator Tuberville: -- running their last. Thank you.

16 Next-generation energy. So we are going to try to
17 double our energy capacity, keep it carbon neutral, and
18 retire 20 percent of the cleanest energy sources on the
19 grid. That is what we are going to try to do. That is our
20 plan.

21 Secretary Granholm: I would not say that we are going
22 to try to retire 20 percent. We want to be able to replace
23 those. We want to be able to add additional advanced
24 nuclear opportunities.

25 Senator Tuberville: You know, many Americans are

1 fearful of nuclear power. They have a right to be. Most of
2 us grew up in this era. You know, decisions made by the
3 Atomic Energy Commission and Congress in the 1960s and 1970s
4 prioritized economics and building nuclear weapons over
5 safety. It was not very safe.

6 Are you familiar with the thorium molten salt breeder
7 reactor that Oak Ridge successfully tested in the '60s?

8 Secretary Granholm: I am familiar that they did, yes.

9 Senator Tuberville: Yeah. Thank you. Alvin Weinberg,
10 who was the director of Oak Ridge and worked on the original
11 Manhattan Project, called the thorium reactor, quote, "only
12 a little less important than the discovery of fission," end
13 quote. That is pretty important. It is one of the safest
14 designs ever tested. In fact, a molten salt breeder reactor
15 based on a thorium cycle cannot melt down -- it is not like
16 the reactors that we use nowadays -- and it actually
17 consumes nuclear waste.

18 At its heart, this reactor contains uranium-233. We
19 have the world's largest supply of uranium-233 right in Oak
20 Ridge, Tennessee. I think you are familiar with this. But
21 your Department was tasked to irreversibly destroy our
22 supply of U-233. Is that correct?

23 Secretary Granholm: Yes. We are diluting and
24 disposing of it.

25 Senator Tuberville: Down-blending it. Yeah. Thank

1 you very much.

2 So we are spending \$50 million a year to down-blend and
3 destroy this resource when, in fact, in 2008, the Department
4 of Energy issued reports cautioning that we should not
5 destroy uranium-233. Have you read these reports?

6 Secretary Granholm: I have not read that one from
7 2008.

8 Senator Tuberville: Okay. In fact, in 2008, the
9 report calls U-233 an irreplaceable natural resource.
10 Congress has asked ranchers on this. Are you familiar with
11 that, we have asked ranchers? Okay. And appropriations
12 bill in 2021 required the DOE to inform Congress about the
13 potential of 233. Do you know when this report was due, Ms.
14 Granholm?

15 Secretary Granholm: What was it due?

16 Senator Tuberville: 2021. I do not know why, but this
17 report is still not finished, and to me it is a very
18 important report. If we are going to do away with gas and
19 we are going to try to cut back on our oil supply, we have
20 got to find some way to generate more power in this country,
21 clean power. We are all for that.

22 My colleague, Senator Warner, and I do not see eye to
23 eye on a lot of things, but we do agree on how egregious the
24 mismanagement and disregard for civilian oversight is within
25 our Department of Energy. We have got to pay attention to

1 facts, and these are facts that our scientists -- we all
2 want to follow science -- this is facts that scientists have
3 come up with. We have a national treasure that could solve
4 our nation's clean energy problems and also have been proven
5 invaluable in the fight of cancer, and we are destroying it.
6 And by our own admission the Department of Energy says
7 destroying U-233 is a terrible, terrible mistake, and we
8 just seem to be overlooking that.

9 Yesterday, Senator Marshall and I introduced a bill to
10 save U-233 called the Thorium Energy Security Act, and I
11 hope and pray that this body will halt the Department of
12 Energy from down-blending this to give us an option to
13 making clean energy for our kids' future, for our grandkids'
14 future, and all of us in the future, because we see what is
15 happening as we speak with all the problems that we are
16 having with cutting off our energy supply and oil supply all
17 at one time. We have to have a plan to make amends for that
18 that we are not using.

19 Thank you very much. Thank you, Mr. Chairman.

20 Chairman Reed: Thank you, Senator Tuberville.

21 Senator Kaine, please.

22 Senator Kaine: Thank you, Mr. Chair, and thank you to
23 the witnesses. It is great to be together with both of you.

24 Last week I co-chaired a Seapower and Readiness
25 Subcommittee hearing, together with Senators Hirono, Cramer,

1 and Sullivan, and we talked about the challenges facing
2 implementing the Shipyard Industrialization Optimization
3 Program, this long-term modernizing and recapitalization of
4 the Navy's century-old public shipyards. In a similar vein,
5 the origins of many of our nuclear Federal research labs and
6 development facilities -- Sandia, Los Alamos, Lawrence
7 Livermore -- date back to World War II.

8 Last year we had testimony by Admiral Caldwell, and he
9 noted, quote, "Without recapitalization of our facilities we
10 will be unable to effectively support nuclear fleet
11 operations and advanced research and development efforts at
12 the level required by this complex technology."

13 Does the Department have a master plan that would be an
14 equivalent to the SIOP on the shipyard side for the
15 recapitalization and modernization of our facilities?

16 Ms. Hruby: Let me address the naval reactors part of
17 that. As you know, there is more than one organization that
18 takes care of those. We do not take care of the shipyards
19 but we do take care of the propulsion capabilities in the
20 Naval Reactors Program with NNSA. And we are putting a lot
21 of money into doing just what you say, to making sure we are
22 building test facilities so that they are modern and
23 consistent with the new propulsion systems that are coming
24 online. We are building the spent fuel handling facility
25 that will allow us to deal with the larger reactors that are

1 used in our fleet today. And we are increasing our R&D
2 budget in Naval Reactors. As Admiral Caldwell says, we can
3 no longer assume that we will have the best systems in the
4 world if we do not invest in R&D.

5 So I feel that the fiscal year 2023 budget for naval
6 reactors is paying a lot of attention to the research and
7 the facilities that we need for naval propulsion going
8 forward.

9 Senator Kaine: And Ms. Hruby, let me just follow up on
10 that. I appreciate that we are making investments. I guess
11 the thing about the SIOP that interests me, on the Navy
12 side, is there is this 20-year master plan and every year
13 they make investments against it, and we can measure against
14 the plan. Are we proceeding according to the plan? Are we
15 making the progress? We hope.

16 So I understand we are making investments in the
17 infrastructure you described but are those investments
18 pursuant to a 10-year master plan or a 20-year master plan
19 that would enable us to measure how the investments we are
20 making will get us to the endpoint that we want?

21 Ms. Hruby: Senator Kaine, I would like to talk to
22 Admiral Caldwell some more about this and get back with you.

23 Senator Kaine: That would be helpful. I mean, just as
24 an example, NNSA estimates that the reactor plant design for
25 the Columbia-class subs will be completed by 2027, so the

1 design will be completed by 2027. And I just wonder, you
2 know, are we making the investments that will enable us to
3 get to that point? So again, how the investments match up
4 against the plan is what I am interested in.

5 Secretary Granholm, one question for you. There is
6 only a handful of universities in the country that have a
7 four-year nuclear engineering program, 17. While there are
8 approximately 47,000 mechanical engineering graduates and
9 17,000 computer engineering graduates annual, there are
10 historically less than 950 graduates from a nuclear
11 engineering program every year.

12 So whether the field is nuclear engineering or applied
13 mathematics and physics, I worry about whether the pool of
14 talent for the important missions of your secretariat and
15 the related agencies is potentially shallow. What are you
16 doing, if anything, to focus on the needs of the workforce
17 in this area?

18 Secretary Granholm: Yes. Thank you, Senator Kaine.
19 It is really a very large concern across all the scientific
20 enterprise, right, including our national labs. We want to
21 make sure we have got enough STEM graduates as well as
22 nuclear scientists to be able to fulfill the mission. I
23 know that Under Secretary Hruby has been taking action the
24 NNSA side. I can tell you that we have ramped up our
25 efforts at recruitment, at showing up at universities to

1 directly pitch. We have engaged in new relationships with
2 HBCUs and MSIs to be able to ensure that we have a diverse
3 pool of scientists and engineers.

4 The point is we want to make science, technology,
5 engineering, math, of course, leaning into nuclear,
6 exciting. I think that the openness now on the civilian
7 side to look at nuclear as power, advanced nuclear reactors,
8 et cetera, has created a great awareness. Obviously, the
9 skills that come from the military are very prime and a lot
10 of where we get our workforce. But we are looking at every
11 avenue to increase recruitment and increase the pipeline of
12 those who are interested in this as well.

13 I do not know if you want to say anything further, Ms.
14 Hruby.

15 Senator Kaine: I am over my time, but I appreciate
16 that answer, Secretary, and I can tell the Administrator was
17 jumping in to say the same thing, so this is on your radar
18 screen.

19 Ms. Hruby: It definitely is.

20 Senator Kaine: That is very apparent. Thank you so
21 much. I will yield back, Mr. Chair.

22 Chairman Reed: Thank you, Senator Kaine.

23 Senator Hawley, please.

24 Senator Hawley: Thank you, Mr. Chairman. Thanks to
25 both of the witnesses for being here.

1 Administrator Hruby, let me start with you. As you
2 know, we are very proud, in the state of Missouri, of the
3 work that is done at the Kansas City National Security
4 Campus to support the nation's nuclear enterprise. I just
5 wonder if you can give me an update on the NNSA's efforts to
6 ensure that the Kansas City campus has the capacity it is
7 going to need, the additional capacity it is going to need
8 to meet production requirements in the coming years.

9 Ms. Hruby: Thank you, Senator Hawley. We are also
10 very proud of the Kansas City National Security Campus, and
11 I am pleased to report we are making good progress on
12 expanding capacity and moving towards the purchase of
13 facilities and land that could help us in the future make
14 sure that we are right-sized at Kansas City.

15 Senator Hawley: Good. Very good.

16 Secretary Granholm, today in the state of Missouri the
17 average price of gasoline, today, as of this morning, is
18 \$4.10. The average price of diesel is \$5.18. And I am sure
19 you have seen the reporting this morning that now AAA is
20 projecting that gas prices will hit a national average --
21 average -- of \$6 a gallon by the month of August. Is this
22 acceptable to you?

23 Secretary Granholm: No, it is not, and you can thank
24 the activity of Vladimir Putin for invading Ukraine and
25 pulling, especially those barrels --

1 Senator Hawley: Oh, nonsense. With all due respect,
2 Madam Secretary, that is utter nonsense. In January of
3 2021, the average gas price in my state was \$2.07. Eight
4 months later -- eight months later -- long before Vladimir
5 Putin invaded Ukraine, that price was up over 30 percent,
6 and it has been going up consistently since. What are you
7 doing to reverse this Administration's policies that are
8 drawing down our own supply of energy in this country, that
9 are throttling oil and gas production in the United States
10 of America? What are you doing about it?

11 Secretary Granholm: With respect, sir, it is not
12 Administration policies that have affected supply and
13 demand.

14 Senator Hawley: How can you say that when the price of
15 gas was up over 30 percent from January --

16 Secretary Granholm: If you could let me answer.

17 Senator Hawley: Answer my question, and it is my time,
18 Madam Secretary. So why do you not answer my question?
19 From January to August, the price of gasoline was up over 30
20 percent, in my state alone. It has been a continuous upward
21 tick since then. And here is what your President did when
22 he first came to office. He immediately reentered the Paris
23 Climate Accord. He cancelled the Keystone Pipeline. He
24 halted leasing programs in ANWR. He issued a 60-day halt on
25 all new oil and gas leases and drilling permits on Federal

1 lands and waters. That is nationwide. That accounts, by
2 the way, for 25 percent of U.S. oil production. He directed
3 Federal agencies to eliminate all supports for fossil fuels.
4 He imposed new regulations on oil and gas and methane
5 emissions. Those were all just in the first few days. Are
6 you telling me that has had no effect on our energy supply?

7 Secretary Granholm: I am telling you that 94 percent
8 of the oil and gas executives that were surveyed by the
9 Dallas Fed said that Administration policies had nothing to
10 do with the increase in the price of oil, and therefore the
11 price of gasoline.

12 Senator Hawley: I am not interested in the opinions of
13 these people. I am interested in the facts.

14 Secretary Granholm: Those are the people who are
15 running --

16 Senator Hawley: Are you telling me --

17 Secretary Granholm: -- the oil and gas industry --

18 Senator Hawley: -- that these policies had no effect?

19 Secretary Granholm: I am telling you that they had no
20 --

21 Senator Hawley: Is that your testimony --

22 Secretary Granholm: -- impact.

23 Senator Hawley: -- that these policies had no effect?

24 Secretary Granholm: I am telling you -- I am telling
25 you --

1 Senator Hawley: Are you telling me -- Madam Secretary,
2 are you telling me, under oath, that these policies had no
3 effect?

4 Secretary Granholm: I am telling you that 94 percent
5 of the oil and gas industry --

6 Senator Hawley: I am not interested in their opinion.

7 Secretary Granholm: -- executives say that they had no
8 effect.

9 Senator Hawley: I am interested in the facts.

10 Secretary Granholm: So no, they did not. Ask Vladimir
11 Putin --

12 Senator Hawley: That is a remarkable statement.

13 Secretary Granholm: -- about the increase in demand
14 and the decrease in supply from pulling Russian barrels of
15 oil off the market, thanks to, rightly, the United States
16 saying we are not going to take Russian oil, coming out of
17 COVID --

18 Senator Hawley: So what explains --

19 Secretary Granholm: -- coming out --

20 Senator Hawley: -- the increase between January and
21 August of 2021?

22 Secretary Granholm: -- coming out of COVID -- coming
23 out of COVID there was an increase in demand because people
24 were driving again. When there was no demand the prices
25 dropped. That is a basic law of economics. The prices

1 dropped --

2 Senator Hawley: I have to say, Madam Secretary, with
3 all due respect, your answers are insulting, and they are
4 insulting to the people of Missouri who are looking for
5 action. Now you said two months ago your Department was on
6 war footing. What are you doing to bring down the price of
7 gasoline, which has been going up consistently since you
8 took office?

9 Secretary Granholm: The price of gasoline is derived
10 from the price of oil. The price of oil is at \$110 a
11 barrel, and it is trading --

12 Senator Hawley: What are you doing to decrease it --

13 Secretary Granholm: -- on a global market.

14 Senator Hawley: -- is my question.

15 Secretary Granholm: Sir, if you could let me finish.

16 Senator Hawley: If you would answer my question.

17 Secretary Granholm: I am answering your question, sir.
18 Oil is traded on a global market. We are paying extremely
19 high prices today, just as they are in Japan.

20 Senator Hawley: What are you doing to get it down?

21 Secretary Granholm: Just as they are in Germany. Just
22 as they are in South Africa.

23 Senator Hawley: What are you doing to get it down?

24 Secretary Granholm: We are calling for an increase in
25 supply. We are releasing a million barrels --

1 Senator Hawley: From whom?

2 Secretary Granholm: -- a day from the Strategic
3 Petroleum Reserve to try to balance out supply and demand.

4 Senator Hawley: Who are you calling for an increase in
5 supply from?

6 Secretary Granholm: It is the largest tool that we
7 have to be able to do that.

8 Senator Hawley: Who are you calling for an increase --

9 Secretary Granholm: Our allies are also --

10 Senator Hawley: -- in supply from?

11 Chairman Reed: Excuse me. Senator Hawley, your time
12 has expired.

13 Senator Hawley: Could I get an answer to this
14 question, Mr. Chairman?

15 Chairman Reed: Senator --

16 Senator Hawley: Who are you calling for an increase in
17 supply from?

18 Secretary Granholm: From our domestic oil and gas
19 manufacturers. From international oil and gas
20 manufacturers.

21 Senator Hawley: Even as you cancelled their leases?

22 Chairman Reed: Senator Hawley, if you want an answer
23 you have to allow the Secretary to answer.

24 Secretary Granholm: I said, we have called repeatedly
25 for increases in supply from domestic oil and gas

1 manufacturers, from international oil and gas manufacturers.
2 We want to increase supply, and that is why the President
3 released an unprecedented amount from the Strategic
4 Petroleum Reserve and our international allies also released
5 from their reserves to try to balance out supply and demand
6 while the oil and gas companies increase supply. And the
7 Energy Information Administration has projected that they
8 will have increased, in the United States, about a million
9 barrels a day by the end of this year.

10 Chairman Reed: Thank you very much.

11 Senator King, please. Thank you, Senator Hawley.

12 Senator King, please.

13 Senator King: Just for the record, Secretary Granholm,
14 I was in Germany about six weeks ago and gasoline was \$8.50
15 a gallon. Was that President Biden's fault?

16 Secretary Granholm: It was not.

17 Senator King: And is gasoline at similar levels in
18 Japan and in other areas of the world right now?

19 Secretary Granholm: Yes, sir. It is traded on a
20 global market, as you have noted.

21 Senator King: And as you say, it is a global market
22 that a President of the United States has very little
23 control over one way or another. Is that correct?

24 Secretary Granholm: That is correct.

25 Senator King: Ms. Hruby, totally different subject.

1 The basis of our deterrent policy, which is the bedrock of
2 our defense policy, is capacity and credibility. We have
3 not tested, and do not test, and I am okay with that, but my
4 question is, how confident can we be in the non-testing
5 regime of computer modeling to maintain the credibility of
6 our nuclear deterrent?

7 Ms. Hruby: Thank you, Senator King. I think we could
8 be highly confident. We have both a very sound science-
9 based Stockpile Stewardship Program and an annual process to
10 assess the reliability of our systems. And year after year
11 our lab directors assess, very carefully, the reliability of
12 the program of our weapons without testing and assure us we
13 have safe, secure, and reliable systems.

14 Senator King: We are assured. Are our adversaries
15 assured? In other words, basically I am asking -- my
16 question is does the non-test regime, the non-physical,
17 destructive test regime maintain the credibility of the
18 deterrent in the eyes of a potential adversary? In other
19 words, do they believe our computer models?

20 Ms. Hruby: Well, it is not just computer models. The
21 answer is I believe that the world understands that we have
22 very safe, secure, reliable, credible nuclear weapons, and
23 they are an effective deterrent.

24 I also just want to add that we do many things besides
25 model. We do subcritical experiments. We do laboratory-

1 based experiments. And we have a large test database to
2 draw on, and we use that over and over again to assure
3 ourselves -- and we are skeptics. You know, that is our
4 role is to make sure that we can be absolutely certain, and
5 we believe ourselves, and the world should believe us.

6 Senator King: Thank you. That is what I wanted to
7 hear. That was my concern.

8 The second level of concern, again, to go back to
9 deterrence, deterrence rests upon mutual rationality, if you
10 will, that the adversary knows that they would be destroyed
11 if they utilized a nuclear weapon. The concern is that that
12 theory does not work with a non-state actor, and I am deeply
13 concerned about nuclear materials falling into the hands of
14 terrorist groups, of non-state actors.

15 I hope that we have a Plan B involving sensors,
16 detection, intelligence to deal with that threat, because
17 all the nonproliferation efforts that we make, which are
18 positive and good, there is still the danger of nuclear
19 material, now that we know Iran, by virtue of us having
20 abrogated the agreement, has vastly shortened their breakout
21 time. Talk to me about how we deal with the threat of
22 proliferation to a non-state actor of nuclear materials.

23 Ms. Hruby: Yeah. We still firmly believe that
24 eliminating threats is the best path, and we have, in our
25 nonproliferation program, on our Defense Nuclear

1 Nonproliferation Program, a significant effort to secure
2 materials around the world with a large variety of
3 countries. Of course, we work not only with allies and
4 partners but with adversaries on those programs. And, in
5 fact, the fiscal year 2023 budget has an increase in our
6 Counterterrorism Program. We still believe we have to pay
7 attention to that while we pay attention to Russia and
8 China.

9 So we are locking up, removing, eliminating materials.
10 That is the bread and butter of our Defense Nuclear
11 Nonproliferation Program.

12 Senator King: I hope you will have urgent attention to
13 that question because that is a true nightmare. And as I
14 say, the theory of deterrence does not work in that case so
15 we need to be thinking about all the other provisions, who
16 you have mentioned.

17 Final quick point, and this is not really a question.
18 But we talked earlier about cyber. A group of us here have
19 worked a lot on cyber in the last couple of years. I have
20 two suggestions that derive from the work that we have done.
21 One is red-team the hell out of your systems. You really do
22 not know how vulnerable you are until you have somebody
23 really good try to hack it in a friendly way. That is
24 number one.

25 Number two, 85 or 90 percent of successful cyber

1 intrusions start with the desktop, with somebody hitting a
2 phishing email, and that is an individual decision at the
3 desktop, and all the technology in the world is not going to
4 prevent that.

5 I have a friend in the energy business. In his company
6 they send fake phishing emails to their staff. If you hit
7 on it once you are reprimanded, twice you are in the CEO's
8 office, third you are gone. And I think there has to be
9 some real urgent pressure on staff to be careful about what
10 they do at their own desktop.

11 Thank you very much. Thank you, Mr. Chairman.

12 Chairman Reed: Thank you, Senator King.

13 Senator Blackburn, please.

14 Senator Blackburn: Thank you, Mr. Chairman. Ms.
15 Hruby, I want to come to you. NNSA announced that it
16 cancelled solicitation for the management and operations at
17 Y-12 and Pantex, and then they are looking at separate
18 management contracts, and they are going to handle these
19 separately after they have a new M&O established. And then
20 they are going to take the existing contractor and make them
21 the overseer. Sounds complicated, does it not, and really
22 sounds like quite a mess, does it not?

23 So I agree. I know you have heard today from others
24 about the instability of the contracting processes for NNSA,
25 and I think that we deserve better. Our nation deserves

1 better, and they deserve more consistency. And Tennesseans
2 that are working up there want to know how this is going to
3 affect their mission, day in and day out, and what their
4 expectation is. They deserve some dependable, competent
5 leadership.

6 So what is the timeline for awarding that for Y-12?

7 What are you looking at?

8 Ms. Hruby: Thank you, Senator Blackburn. Let me just
9 say that I could not agree more. While this sounds
10 complicated the intention is to get long-term stability and
11 reward our M&O contractor workforce --

12 Senator Blackburn: Okay.

13 Ms. Hruby: -- which does the work of NNSA. Make no
14 doubt about it --

15 Senator Blackburn: All right.

16 Ms. Hruby: -- that is the people who we count on.

17 Senator Blackburn: Then what are the local management
18 implications of what you are doing, the path you are going?

19 Ms. Hruby: Right now, Pantex and Y-12 share a field
20 office.

21 Senator Blackburn: I know what the setup is. I am
22 asking about the long-term implications. What are those?
23 What are the cost implications?

24 Ms. Hruby: Okay.

25 Senator Blackburn: Are you doing this and pushing back

1 on infrastructure, because that is imperative, as you know,
2 and there is a backlog that we are waiting to have
3 addressed.

4 Ms. Hruby: Yeah. This is in order to get dedicated
5 leadership at Y-12 and at Pantex because of the tremendous
6 workload that we are asking of those facilities, separate
7 dedicated leadership. It may cost a little bit more, but it
8 is worth it because we have to make sure that we can
9 deliver.

10 Senator Blackburn: And timeline?

11 Ms. Hruby: We expect that the first RFP will be out
12 this year. We will have that awarded in 2 years, and we
13 will then, one year later --

14 Senator Blackburn: So we are 3 years away from seeing
15 consistency, is what you are telling me.

16 Ms. Hruby: We are, but let me --

17 Senator Blackburn: Okay. Let me move on. You know
18 that that is unacceptable, and you know that that is not
19 fair to the Y-12 employees. But let us continue to discuss
20 that and to work on that issue.

21 Secretary Granholm, Senator Tuberville mentioned
22 uranium processing, and of course the processing facility in
23 Tennessee is one of our largest construction projects. And,
24 you know, it gets held up time and again with budget by
25 indecision, and the UPF was to come in in 2025 at \$6.5

1 billion. That is no longer what is estimated, and the
2 expectation is that it will come online in August 2026. Is
3 that when you expect to deliver UPF?

4 Administrator, are you wanting to answer that?

5 Ms. Hruby: Yeah, let me jump in. The answer is yes,
6 that is our plan, and we are looking closely right now,
7 independent experts, at any cost implications.

8 I just want to say, for \$6.5 billion project executed
9 over 8 years during COVID and during all the supply chain
10 issues we have, we feel this project is incredibly
11 successful.

12 Senator Blackburn: Well, you mentioned yesterday, you
13 told one of my colleagues that an eight-month delay was a
14 commendable accomplishment, and I really disagree with that
15 comment. But we are going to continue to work on it.

16 Madam Secretary, I want to come back to you on the
17 issue of transportation fuel because that is a top topic.
18 And with the estimate being \$6 a gallon during January, we
19 get asked about this every single day -- every single day.
20 So what are you doing every day to increase production,
21 because you are eliminating leases, you are eliminating
22 drilling on Federal land. Senator Hawley went through the
23 litany of steps that you all have taken, and we hear from
24 people in the oil industry about the adverse impact of your
25 actions.

1 So tell me what you are doing every day to increase
2 U.S. oil production so that we return to being energy
3 independent and energy dominant, like we were the day that
4 you went in as Secretary.

5 Secretary Granholm: Yeah. We agree that we want to
6 increase supply. It is why, for example, in the first year
7 of the Biden administration more permits have been issued
8 than --

9 Senator Blackburn: But you do not give the drilling
10 permit.

11 Secretary Granholm: No, we are giving those permits.
12 We want to, and we have called upon --

13 Senator Blackburn: How many people are working on
14 them? Is it one?

15 Secretary Granholm: No, it is actually across the
16 government. It is over at the Department of Interior. It
17 is not in my lane.

18 Senator Blackburn: Okay. All right.

19 Secretary Granholm: But I do know that we have been
20 increasing permitting because we want to see increased
21 production in the United States and abroad, to be able to
22 make up for the lost barrels that have been off the market
23 as a result of Putin's invasion of Ukraine.

24 Senator Blackburn: Ma'am, I would encourage you to
25 stop staying that. We are importing 670,000 barrels of oil

1 per day. The cost of a gallon of gas, the cost of
2 fertilizer, the cost of diesel are at all-time highs.

3 Secretary Granholm: I know.

4 Senator Blackburn: We need your best effort.

5 Secretary Granholm: We are working on this every day
6 to the extent we can, given that it is a global market and
7 oil is traded --

8 Senator Blackburn: It is.

9 Secretary Granholm: -- on a global market.

10 Senator Blackburn: Thank you, Mr. Chairman. I am over
11 time.

12 Chairman Reed: Thank you very much, Senator Blackburn.

13 Senator Kelly, please. Excuse me. Yes, Senator Kelly.

14 Senator Kelly: Thank you. Thank you, Mr. Chairman.

15 Administrator Hruby, during your confirmation hearing
16 last year I asked you about the need to recruit the next
17 generation of scientists and engineers to replace an aging
18 workforce, and I highlighted the University of Arizona's
19 relationship with the National Nuclear Security
20 Administration through the Minority Serving Institution
21 Partnership Program. And you said that it would be a top
22 priority moving forward, and I appreciate your commitment to
23 that.

24 As the chair of the Emerging Threats and Capabilities
25 Subcommittee on this committee, I held a hearing a couple of

1 months back on innovation and the development of emerging
2 technologies that will play such a critical role for our
3 future national security. And a key takeaway for me is that
4 we cannot innovative if we do not have a highly trained and
5 skilled and motivate workforce to do that.

6 So considering that your agency has now achieved its
7 highest workforce levels in the last 9 years I have got a
8 couple of questions. How much of that increase is
9 attributable to new STEM-related recruits and, in your view,
10 are this year's numbers the beginning of an upward trend,
11 and is there any opportunity to accelerate that?

12 Ms. Hruby: We do have a great need to hire in the
13 complex. Our complex has about 57,000 employees. A great
14 deal of those are in the STEM disciplines. We have to hire
15 to replace retirements, and we have to hire because we are
16 growing. As a result, we have many pipeline programs, as
17 you mentioned, the Minority Serving Institution Programs,
18 other grant programs and centers of excellence, and we have
19 announced a program for apprenticeships for craftworkers and
20 technicians that we need desperately also around the
21 complex.

22 So we are very worried about the workforce but we feel
23 like we are putting good programs in place to recruit. And
24 like I said, both growth and attrition from retirement and
25 voluntary attrition.

1 Senator Kelly: So do you feel it looks pretty good for
2 the next 10 years? Are you on a good trajectory?

3 Ms. Hruby: I think we cannot ever take our eye off
4 this. It is close. I mean, we feel like this is a real
5 race for talent, and we are trying to do things to improve,
6 especially for both our Federal workforce and our M&O
7 workforce, we are paying attention to pay, benefits, the
8 environment that we offer, and we are stressing how
9 important this mission is so people can feel good, as they
10 should, about the work they do every day.

11 Senator Kelly: Please let us know what we can do to
12 help there.

13 Secretary Granholm, so as you and Administrator Hruby
14 know, as you both know, rare earth metals are vital in the
15 production of many of our most complex national security
16 systems, from missile guidance systems to night vision
17 goggles, and the list is very long, actually, and both
18 nuclear weapons and nuclear reactors are on that list. Much
19 like the semiconductor industry, a very high percentage of
20 our rare earth metals are sourced overseas, causing
21 potentially catastrophic supply chain interruptions in our
22 production of these complex systems.

23 And this is, in part, what led me to sponsor the
24 Restoring Essential Energy and Security Holdings Onshore for
25 Rare Earth Act of 2022. I know it is a mouthful. And I

1 sponsored that with Senator Cotton. This legislation would
2 create a strategic rare earth metal reserve to limit the
3 impact of those potential interruptions.

4 So for either of you, first of all, how vital are rare
5 earth metals to the production of our nuclear weapon systems
6 and also our shipboard nuclear reactors, and what is the
7 risk posed by reduced access to rare earths?

8 Secretary Granholm: Yeah. Thank you for your
9 leadership on this. This is a moment where we have to look
10 at all of the things that we used to rely upon other
11 countries for when we have them within our geographic
12 boundaries. Rare earth minerals are critical for the
13 nuclear weapons cycle but it is also critical for a whole
14 array of other things, including electric vehicles, as you
15 know.

16 The President and the invoking of the Defense
17 Production Act -- and thank you for supporting the
18 supplemental for Ukraine which funded that to the tune of
19 \$500 million -- very important for us as we move forward.
20 We will be working with DoD to make sure that we are
21 sourcing, doing responsible extraction, processing. Your
22 support, for example, of the Bipartisan Infrastructure law
23 that allowed for us to put out a funding opportunity
24 announcement for processing, because the United States does
25 not do any processing of critical minerals either.

1 So that whole chain, we need to be doing here. Thank
2 you for your leadership on it.

3 Senator Kelly: I do not want to go too far over but
4 yes-or-no answer from each of you. Do you agree it is
5 important that we have a strategic reserve of rare earth
6 minerals to hedge against potential supply chain issues?

7 Secretary Granholm: Yes.

8 Ms. Hruby: Yes.

9 Senator Kelly: Thank you. Thank you both. Thank you,
10 Mr. Chairman.

11 Chairman Reed: Thank you, Senator Kelly.

12 Senator Scott, please.

13 Senator Scott: Thank you, Chairman. Secretary
14 Granholm, as you know -- I mean, you follow the news -- we
15 are hitting record gas prices each and every day. The
16 poorest families in this country are being devastated with
17 gas prices. They are being devastated with electricity
18 rates, heating oil over the winter.

19 I always thought the purpose of the Department of
20 Energy was to make us energy independent and hopefully get
21 prices down. Since the Biden administration came in office
22 they shut down the Keystone Pipeline, they have attacked the
23 oil and gas industry, they have made it difficult to get
24 permits. The Biden administration has gone out and attacked
25 the oil and gas companies, saying they intentionally do not

1 want to drill for oil here while this Administration makes
2 it difficult to get permits.

3 Then the latest is they go to Iran and Venezuela and
4 say they want oil from them, and then this week they went
5 and relaxed sanctions on Venezuela so they can drill more
6 oil in Venezuela but not more oil in this country.

7 So can you explain why your Administration makes it
8 more difficult for us to drill more oil in this country and
9 why you believe it is in our national security interest to
10 get oil from Iran, clearly a dedicated enemy of this country
11 and of our ally like Israel, and why would you want to do
12 business with Maduro who has committed genocide against his
13 own citizens, and millions and millions of people have left
14 Venezuela because he has forced starvation in his country.

15 Secretary Granholm: Thank you, Senator. First, the
16 United States will not be importing any oil from Iran or
17 Venezuela. Number two, it is really important to know that
18 this Administration is calling for increased production in
19 the United States and has issued record number of permits
20 for oil and gas drilling. Since this President took office,
21 more permits issued in his first year than issued in the
22 first 3 years of the Trump administration. We are now a net
23 exporter of oil, which just speaks to the amount of
24 production that we have been doing, and we will be at record
25 production by the end of this year.

1 A survey was done --

2 Senator Scott: If that is true how could gas prices be
3 at the -- if that is true, why would gas prices have gone up
4 like it has gone up?

5 Secretary Granholm: As you know, oil -- and gasoline
6 is derived from oil -- oil is traded on a global market.
7 The global supply of oil has decreased as a result of the
8 Russian invasion of Ukraine because they used to be one of
9 the world's largest exporters, and countries like the United
10 States have rightfully said we are not going to take any
11 Russian oil because we do not want to finance Putin's war.

12 Consequently, there have been about 1.5 million barrels
13 per day that have been taken off of the global market. The
14 citizens in Florida and the citizens in South Africa and the
15 citizens in Japan are all paying record amounts because it
16 is traded on a global market. It is why increasing supply
17 is so important. It is why the President has called for 1
18 million barrels per day to be released from the Strategic
19 Petroleum Reserve, and our allies across the world have also
20 called for increases in theirs, as we are asking for the oil
21 and gas industry to increase production.

22 Senator Scott: So what you just said is not consistent
23 with what I have been given. So if you could get me all
24 that information about over the last, say, 10 years, of all
25 the permits. And do you think it is appropriate that your

1 Administration says the oil and gas companies intentionally
2 do not want to drill for oil?

3 Secretary Granholm: Well, I think that some are
4 bringing rigs online, and there are some who have said, in
5 shareholder calls, that they are holding off on investing in
6 capital to favor shareholder buybacks. So it is not
7 consistent across the board. But I will say --

8 Senator Scott: It has nothing to do with the fact that
9 you guys attacked them --

10 Secretary Granholm: No.

11 Senator Scott: -- that you attacked the oil and gas
12 industry?

13 Secretary Granholm: Absolutely no. We are calling
14 repeatedly. I talk to oil and gas industry members all the
15 time. We are calling repeatedly for them to step up at this
16 moment and increase the rig count. It is historically
17 coming back after COVID, where there was a lot shut down,
18 very slowly.

19 Senator Scott: Let me go to my next question. Diesel
20 fuel prices have hit record highs. Last year it was \$3.17.
21 Now it is \$5.63. I just heard a story from a trucker in
22 Orlando who is reconsidering the trucking business because
23 diesel fuel is too expensive. He said the cost of diesel
24 has single-handedly taken us out of the game, one by one, no
25 matter how big you are. My dad was a truck driver. I know

1 how difficult that job is. He and my mom did not make much
2 money. They would be doing better now until diesel prices
3 went up. So I do not know how a family that, you know, is
4 an independent contractor and trying to make ends meet is
5 dealing with this.

6 What I do not get is, I mean, I do not see that you
7 guys are doing anything to get prices down. You look at
8 around this country. I mean, people are losing their jobs.
9 Every month you are in office gas prices are up. Diesel
10 prices are up. People are losing their jobs. I mean, I do
11 not see anything happening.

12 Secretary Granholm: We share your deep concern about
13 this. For everyday citizens there is no doubt about it.
14 That is why we have to increase supply right now. It is why
15 we continually call for more investment in rigs to be able
16 to do the extraction necessary to get supply up. It is
17 happening all across the globe. This is why the inflation
18 numbers, a huge number of that, 70 percent, is related to
19 fuel. That is true in the United States. It is true all
20 across the world.

21 We need to increase supply, even as we accelerate our
22 move to clean energy, but we need to increase supply right
23 now to address the very concern that you raised.

24 Senator Scott: Real quick. If you were in the
25 business and your government was attacking -- so if you were

1 in the oil and gas business and your government is
2 attacking, and the President says, "I want to get rid of
3 fossil fuel," would you want to go and invest a whole bunch
4 of new money?

5 Secretary Granholm: With oil at \$110 a barrel I do not
6 know that hurt feelings have anything to do with that. I
7 think it involves fiscal discipline, as they say, and the
8 decision during COVID to ramp back and now to take advantage
9 of these high prices.

10 However, some area increasing, and I will say this.
11 The Dallas Fed did a survey of all of the oil and gas
12 executives, and they found, last month, that 94 percent of
13 them say that the high prices and the lack of production
14 have to do with things other than this Administration's
15 policies. It has to do with the price of oil on a global
16 market.

17 Senator Scott: It is a pretty good coincidence. It
18 happened right after you guys took office. Thank you.

19 Chairman Reed: Thank you, Senator Scott.

20 Senator Blumenthal, please.

21 Senator Blumenthal: Thank you, Mr. Chairman. Welcome
22 to both of you. Thank you for your service, Secretary
23 Granholm, particularly, your service before the
24 Administration as governor of Michigan and as attorney
25 general of that state when we had the opportunity to work

1 together. You have done great work and I appreciate you
2 being here today.

3 I want to focus on the last part of your testimony
4 dealing with cybersecurity. We are very excited that you
5 are going to be coming to Connecticut tomorrow and visiting
6 the Millstone Nuclear Power Plant as well as the State Pier,
7 where more wind power is going to be generated. And you
8 make the point, I think, very, very well in your testimony
9 that -- and I am quoting -- "we have a strategic opportunity
10 like never before while we are tackling the impacts of
11 climate change. By deploying the next generation of wind,
12 solar, hydrogen, and nuclear systems we can build in
13 cybersecurity," end quote.

14 I would suggest that we need cybersecurity in existing
15 industrial control system -- nuclear, wind, solar, not only
16 new ones but those being built -- and as Senator Shaheen
17 highlighted, we are vulnerable. In fact, there has been
18 speculation about why the Russians have not attacked us in
19 the cyber space. There are a number of informed theories
20 about why they have not, but clearly, without going into the
21 classified information that we have, they potentially have
22 the capacity to do so. I will be interested tomorrow to
23 hear and see some of your suggestions about how we can
24 safeguard our cybersecurity, particularly on nuclear. I
25 wonder if you can discuss a little bit about more of the

1 specifics now.

2 Secretary Granholm: Yeah. We agree that you have to
3 address the existing enterprise as well as build by design,
4 build cyber in by design. And both are happening. I know
5 that Administrator Hruby has got a whole effort on cyber
6 happening over at the NNSA. They have hired an evaluation
7 to happen, and that evaluator has identified some points of
8 excellence but also some points of challenge.

9 And the points of challenge involve further investment
10 in the workforce, as we have discussed here, as well as in
11 infrastructure that will prevent hacking, prevent
12 penetration. And that includes monitoring. It includes
13 detection. It includes addressing on the spot. It includes
14 projection about where things are going.

15 So all of that must be a really robust part of our
16 investments, and we appreciate so much your and the others
17 who have raised this issue here because this is certainly
18 not a new conversation and it certainly will not be the last
19 conversation we have on this.

20 Senator Blumenthal: Have you reviewed the security at
21 the Millstone plant, cybersecurity at the Millstone plant,
22 and how would you assess vulnerability?

23 Secretary Granholm: The Millstone, where we are going
24 tomorrow, you mean? Yeah. I have not yet. I am looking
25 forward to coming to learn more as well.

1 Senator Blumenthal: Well, we hope that you will give
2 us the benefit of your assessment when you finish with your
3 review, because cybersecurity there and at every nuclear
4 power plant has to be regarded with a tremendous urgency,
5 given what the Russians have done in Ukraine in 2015, 2016,
6 and now during the invasion at the site of the nuclear power
7 plant there.

8 I want to just finish by giving you an opportunity to
9 expand a little bit on the questions that Senator Scott was
10 asking, and I agree totally that the reluctance to produce
11 more is not the result of hurt feelings by the oil
12 companies. Their focus is on the bottom line. And perhaps
13 you could expand a little bit on why they have not produced
14 more and what can be done to persuade them to produce more,
15 even as we go into more of renewables. In the short term
16 production might be helpful, and their reluctance to produce
17 more now.

18 Secretary Granholm: Yeah. Just briefly, I know we are
19 almost out of time, but I think it is a really important
20 point to note, that during COVID there was pressure from the
21 investment community investing in oil and gas companies to
22 say you have got to pull up off of investing in capital and
23 exercise what is known as fiscal discipline. And as a
24 result, a lot of rigs and capital investment came offline.

25 When we were coming out of COVID those rigs did not

1 pick up to the extent that the demand was there, and they
2 will say in large measure it is because Wall Street wanted
3 to take advantage of profits, of the profits of the
4 increasing cost of oil and gas, due to the increasing
5 demand. Just simply supply and demand.

6 Then it is compounded, of course, by the pulling off of
7 oil on the global market because of the Russian invasion.
8 So a million and a half barrels are off the market, and now
9 you have got a slow ramp-up due to COVID, and now you have
10 got other countries, rightfully so, like the EU deciding
11 perhaps to not take on any more Russian oil, and then you
12 will also have the opening up of the Chinese market because
13 they are coming out of COVID as well.

14 All of those compound to create a huge pressure on
15 demand, and we want supply to increase. It is not this
16 Administration. It is happening all over the world. As
17 Senator King said, he saw that gas was \$8.00 a gallon when
18 he was in Germany. It is skyrocketing across the world, and
19 this is why we are asking these oil and gas companies to
20 step up, and our allies to step up production right now, to
21 ease that pressure, even as we accelerate the move to clean
22 energy, because ultimately a move to clean energy is the
23 homegrown, secure kind of energy that will make us
24 independent.

25 Senator Blumenthal: I agree. Thank you.

1 Chairman Reed: Thank you very much, Senator
2 Blumenthal.

3 Senator Sullivan, please.

4 Senator Sullivan: Thank you, Mr. Chairman. Madam
5 Secretary, I was not going to go into these questions but I
6 just have to disagree with you. I care a lot about energy,
7 right. It is a national security issue. We talk about it
8 here. There has been a comprehensive hostility to the
9 energy sector by this Administration, not necessarily you,
10 day one. I watch it every day. Every day.

11 So you are saying we need to increase supply. Let me
12 give you just the last 3 weeks. The Department of Interior
13 -- again, not you -- announced that they are taking half of
14 the National Petroleum Reserve, set aside by Congress for
15 oil and gas drilling in my state, off the table, the most
16 prolific oil reservoir in the world right now. Everybody
17 who explores there finds billion-barrel fields.

18 Secretary Haaland, your colleague, came to Alaska and
19 announced half of it is off the table. That is not focused
20 on increasing supply. It is the opposite.

21 Let me give you another one. Last week Cook Inlet
22 Basin -- okay, that is the other prolific oil and gas field
23 in Alaska -- at the last minute the Biden administration
24 canceled the lease sale. That is exactly the opposite of
25 getting supply on the market.

1 Three weeks ago, the Council on Environmental Quality
2 issued new NEPA rules. Everybody and their mother knows
3 what they are. They meant to delay energy projects. I read
4 them in detail. This is the last 3 weeks -- NPRA off the
5 table, Cook Inlet lease sale cancelled, and NEPA rules to
6 kill the production of American energy. That is what you
7 guys just did.

8 Do you have a response to any of that, and I would like
9 details. And maybe you do not know. And look, I am not
10 coming after you. The Department of Interior is a disaster,
11 from day one, and day one President Biden came and said, oh,
12 we are going to stop anything in ANWR. He cannot do that.
13 The Congress of the United States said there shall be two
14 lease sales in ANWR. President, day one, we are not going
15 to do ANWR. Sorry, Mr. President. Your job, under the U.S.
16 Constitution, is to faithfully execute the law. The laws
17 says two lease sales.

18 So you guys have been, from day one -- not you, maybe
19 not you, not as bad -- crushing the energy sector, and it is
20 a fact. And Rick Scott is exactly right. But can you
21 comment on the three examples I just gave. You say you want
22 to increase supply. Everything I just said is about
23 directly decreasing supply. What about those -- NPRA, Cook
24 Inlet, new NEPA rules?

25 Secretary Granholm: I hear what you are saying.

1 Senator Sullivan: Do you agree with me that those are
2 about limiting supply?

3 Secretary Granholm: No. It is about limiting supply.

4 Senator Sullivan: Of course they are. When you take
5 leases off the table --

6 Secretary Granholm: But maybe there are other concerns
7 why a lease might be taken off the table in a sensitive
8 environmental area. Maybe it has nothing to do with --

9 Senator Sullivan: Half of the National Petroleum
10 Reserve of Alaska?

11 Secretary Granholm: You know, this is not my lane so
12 --

13 Senator Sullivan: Cook Inlet?

14 Secretary Granholm: And I understand that there was no
15 interest on the part of --

16 Senator Sullivan: That is not true. That is
17 fundamentally a lie.

18 Secretary Granholm: Okay. Well --

19 Senator Sullivan: Again, that is not your --

20 Secretary Granholm: -- again, these are not my areas
21 of responsibility.

22 Senator Sullivan: How about the NEPA rules?

23 Secretary Granholm: Again, that is EPA. That is not
24 me.

25 Senator Sullivan: No, no. That is the White House,

1 CEQ.

2 Secretary Granholm: Well, let me just say this. We
3 want to see an increase in supply and we want it to be done
4 in a responsible way.

5 Senator Sullivan: The actions I just --

6 Secretary Granholm: I am just saying --

7 Senator Sullivan: -- laid out in the last 3 weeks
8 would indicate directly otherwise.

9 Secretary Granholm: As I said earlier, and maybe you
10 were not here for that, but there have been, under the Biden
11 administration's first year in office, more permits issued
12 for oil and gas drilling than the first 3 years of the Trump
13 administration.

14 Senator Sullivan: You have 4,600 applications to drill
15 stuck at the Department of Interior, 4,600. I recently
16 checked on this.

17 Secretary Granholm: And there are 9,000 permits --

18 Senator Sullivan: No. Applications to drill. That is
19 very different --

20 Secretary Granholm: -- there are 9,000 permits out
21 there that are sitting unused.

22 Senator Sullivan: Okay. Look, I just happen to
23 fundamentally disagree with you.

24 Chairman Reed: Senator, please.

25 Senator Sullivan: Mr. Chairman, this is an incredibly

1 important issue for the national security of our country.
2 The Biden administration is openly hostile to the energy
3 sector, and then they try to come in front of committees
4 like this and say they are not. It is just not true.

5 Let me just ask another one. The President is in Japan
6 right now. This is in your area. All of our allies in Asia
7 and in Europe want a more American LNG. I think the
8 President is going to announce something along the lines of
9 we should get more LNG. I think you agree with that, Madam
10 Secretary. I would like your views. American LNG to our
11 allies.

12 John Kerry, though, has come out I know to Japanese
13 officials saying you should be very careful on buying
14 American LNG. Do you agree with John Kerry's approach to
15 going to Asia saying, "Well, you should have reluctance to
16 buying American LNG"? I hope you can disavow that. I have
17 heard that from Japanese officials, telling me that he is
18 saying that. I mean, whose side is this guy on?

19 So where are you on the exports of clean-burning
20 American LNG to our allies in Europe and in Asia, and do you
21 think the President -- my understanding is, I hope he does,
22 he is going to announce some kind of initiative in Japan
23 this week.

24 Secretary Granholm: I cannot preview what he is going
25 to be announcing but I will say that we believe that

1 American LNG is an important way to help our allies. We, at
2 the Department of Energy, have permitted an additional four
3 LNG terminals for export to the EU. We also have permitted
4 30 billion cubic feet of LNG, both at FERC and at DOE that
5 have not even begun construction yet. We believe that LNG
6 is one way to help our allies, and we think it is important.

7 And we are also encouraged by the fact that many of the
8 producers of LNG are eager to use the infrastructure
9 associated with LNG to make it hydrogen ready. So both
10 pieces.

11 Senator Sullivan: Good. So just real quick. So
12 assume John Kerry did tell some Japanese officials to be
13 reluctant to buy American LNG. He is not Senate confirmed.
14 He is kind of, in my view, a nobody, with a job in the White
15 House that they will not even give us any information on how
16 much he has spent and how many people he employs. But you
17 are a Senate-confirmed Secretary of Energy. Assume he said
18 that. Can you just openly reject that and say of course we
19 would want our allies to buy American LNG?

20 Secretary Granholm: I have the greatest respect for
21 John Kerry. I cannot assume anything or believe words put
22 in his mouth. I do believe he is doing an amazing job
23 across the globe, getting communities and countries to step
24 up to their commitments to reduce their greenhouse gas
25 emissions.

1 Senator Sullivan: I am just asking to answer a simple
2 question.

3 Secretary Granholm: I understand you are asking me for
4 a hypothetical --

5 Senator Sullivan: Our Japanese allies need to know
6 this. They have come to me.

7 Secretary Granholm: We have spoken with Japan
8 repeatedly, and Japan is really interested in forming a
9 relationship on LNG in a stronger way. We are supportive of
10 that.

11 Senator Sullivan: So buying American LNG would be a
12 good thing, not a bad thing.

13 Secretary Granholm: Yes.

14 Senator Sullivan: Thank you.

15 Chairman Reed: Thank you, Senator Sullivan. Thank
16 you, Madam Secretary and Madam Administrator.

17 We are going to conclude the open --

18 Senator Sullivan: Mr. Chairman, can I ask one final
19 question? It is not for the Secretary. It is a quick one.

20 Chairman Reed: One.

21 Senator Sullivan: For Madam Secretary Hruby. Can I
22 ask you, the nuclear enterprise that you, Admiral Caldwell,
23 and Secretary Granholm are in charge of is really
24 remarkable, and the culture there, what we have been able to
25 do in terms of nuclear-powered Navy vessels, including

1 submarines is a really, really impressive record.

2 With regard to AUKUS, which I think is a Biden
3 administration initiative that is really, really good and
4 really important, and I have been publicly supporting the
5 President and his team on that initiative, how do we balance
6 the culture and safety of what the nuclear enterprise has
7 been able to achieve for our nation, particularly the
8 nuclear Navy, with the goals, which I fully support, of
9 broader cooperation in that realm with the Australians and
10 the Brits, and are there areas beyond nuclear that you think
11 the AUKUS initiative should encompass? And Madam Secretary,
12 to the extent you want to answer that as well. It is an
13 important question, and I want to be very supportive of this
14 very important initiative.

15 Ms. Hruby: Thank you. Thank you for your support of
16 AUKUS. I think the naval reactors folks and everybody on
17 the U.S. and U.K. teams are doing a terrific job during this
18 18-month study period, and have found paths through this
19 that will preserve and even make better our capabilities and
20 our nonproliferation regime. So I am very optimistic about
21 what this agreement can do.

22 I do think there are other things that would be
23 interesting to work on in the U.K., Australia, U.S. I think
24 there are energy things. I think there are climate things.
25 I think there are science and technology, and I look forward

1 to the possibility of doing that as this agreement matures.

2 Senator Sullivan: Well, if there are things that we
3 can do on the committee to help support it we certainly want
4 to do it. Madam Secretary, do you have any views on AUKUS
5 or what we can be doing?

6 Secretary Granholm: No, just to pick up on the energy
7 side of things, I know they are going through an election
8 right now, but I hopeful that whoever survives that will
9 continue to work with us on, for example, hydrogen
10 production. They are doing great work in Australia on that,
11 and I am very close with their minister, my counterpart, on
12 sharing technology ideas and strategies regarding the
13 production but the export of clean hydrogen too.

14 Senator Sullivan: Thank you, Mr. Chairman.

15 Chairman Reed: Thank you, Senator Sullivan.

16 Madam Secretary, Madam Administrator, we are going to
17 conclude the open session and we will reconvene at 11:30 in
18 SVC-217 for the closed session.

19 Before we do that, though, throughout this discussion
20 there has been references to the Dallas Federal Reserve
21 Report. It is my understanding that the question was asked
22 about what was the number one reason, or the primary reason
23 rather, that there was not increases in production, and the
24 response, 60 percent of those surveyed said it was, quote,
25 "investor pressure to maintain capital discipline." Is that

1 accurate, Madam Secretary?

2 Secretary Granholm: That is accurate. Fifty-nine
3 percent said that.

4 Chairman Reed: So that is really sort of saying, you
5 know, we are going to hold back our capital and give it to
6 our shareholders. We will just hold it back.

7 And then I believe also too, and if you can confirm
8 this, that domestic crude oil output today is less than it
9 was in 2019.

10 Secretary Granholm: You are talking about our crude
11 oil?

12 Chairman Reed: Our crude oil.

13 Secretary Granholm: It is, but we will be at record
14 production by the end of this year.

15 Chairman Reed: Okay. And then there is 12 million
16 acres, approximately, of leased Federal lands that have not
17 yet been drilled?

18 Secretary Granholm: Correct. Leases on actually over
19 20 million acres, on and offshore.

20 Chairman Reed: Very good. Thank you very much for
21 that clarification.

22 At this point we will recess and rejoin in SVC-217.

23 Thank you.

24 [Whereupon, at 11:15 a.m., the hearing was adjourned.]

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